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10/050,316	01/15/2002	Felix G. Racca	BEAS-02095US0	8714
23910	7590	10/31/2007	EXAMINER	
FLIESLER MEYER LLP			KANG, INSUN	
650 CALIFORNIA STREET				
14TH FLOOR				
SAN FRANCISCO, CA 94108				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/050,316	<b>Applicant(s)</b> RACCA ET AL.	
	<b>Examiner</b> Insun Kang	<b>Art Unit</b> 2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 21-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 21-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This action is in response to the RCE amendment filed 10/4/2007.
2. As per applicant's request, claims 1, 23, and 30 have been amended and claims 31-34 have been added. Claims 1-6 and 21-34 are pending in the application.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-6 and 21-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sarkar et al. (US patent 6,754,659) hereinafter referred to as "Sarkar," in view of Nicholson et al. (US Patent 6,631,519) hereafter Nicholson, and further in view of Flores et al. (US Patent 5,734,837) hereafter Flores.

Per claim 1:

Sarkar discloses:

-an introspection module that generates a catalog of generic components by introspecting original JavaBeans and transforming a plurality of implementation-specific components into a plurality of generic components, the implementation-specific components associated with a plurality of implementations (i.e. "To create the generic EJB...known Java and EJB...interact specifically with all of the Java bean support code...generated for an existing Java bean," col. 5

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lines 47-55; “introspecting each of the one ore more original Java beans to determine their setter/getter,” col. 4 lines 28-42; “installing the single generic EJB in an EJB container,” col. 4, lines 14-27).

Sarkar does not explicitly teach that the plurality of implementation-specific components is in heterogeneous applications created in different programming languages. However, Nicholson teaches that such a business process architecture was known in the pertinent art, at the time applicant's invention was made, to interoperate with a heterogeneous environment by automatically generating interface definitions for reducing inconsistent interface and data model definitions in a complex workflow project (i.e. col. 2 lines 5-11; col. 8 lines 48-67). It would have been obvious for one having ordinary skill in the art to modify Sarkar’s disclosed system to incorporate the teachings of Nicholson. The modification would be obvious because one having ordinary skill in the art would be motivated to seamlessly integrate with diverse applications other than Java applications ensuring data consistency by automatically generating interface definitions as suggested by Nicholson (i.e. col. 2 lines 5-11; col. 8 lines 48-67).

Sarkar further discloses: a component manager coupled to the introspection module and operable to manage said catalog generated by the introspection module by defining and organizing the generic components in said catalog; and a process designer coupled to the component manager and operable to: select at least one of the generic components from said catalog managed by the component manager (i.e. “defining a single generic EJB and installing the single generic EJB in an EJB container...generating EJB support code for each of the one or more original Java Beans,” col. 4 lines 20-27; “introspecting each of the one ore more original Java beans to determine their setter/getter,” col. 4 lines 28-42; “the generic EJB creates the

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helper object corresponding to the original Java bean using Java reflection...passed to the generic EJB's business method," col. 4 lines 50-58).

Sarkar and Nicholson do not explicitly disclose graphically constructing a business process definition that includes a series of graphically represented activities linked by one or more transitions. However, Flores teaches that such a graphical tool was known in the pertinent art, at the time applicant's invention was made, to allow a "business process designer to specify the business process design with its network of workflows" via GUI (col. 6 lines 12-20; col. 8 lines 26-30). It would have been obvious for one having ordinary skill in the art to modify the disclosed system of Sarkar and Nicholson to incorporate the teachings of Flores. The modification would be obvious because one having ordinary skill in the art would be motivated to ease programming in business process through visual representations (i.e. col. 8 lines 13-17) as suggested by Flores.

Sarkar further discloses at least one activity of said business process definition invokes the selected generic component from said catalog; (i.e. "installing the single generic EJB in an EJB container," col. 4 lines 14-27).

Flores further discloses a repository for storing the graphically generated business process definition (i.e. "The definitions database contains records that define each type of business process and workflow in the system," col. 5 lines 15-20).

Sarkar combined with Nicholson and Flores further discloses one or more process engines that execute said business process definition to instantiate a business process instance, wherein the business process instance interacts with the plurality of heterogeneous applications by invoking the generic components in said catalog (i.e. "executing the EJB support code to

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drive the generic EJB to perform the functions of the one or more original Java Beans in the EJB environment,” col. 4 lines 20-27).

Per claim 2:

The rejection of claim 1 is incorporated, and further, Sarkar teaches:

An organizational repository that includes said catalog organizational data and a plurality of business processes generated by said process designer (i.e. col. 2 lines 16-41; col. 6 lines 18-29) as claimed.

Per claim 3:

The rejection of claim 1 is incorporated, and further, Sarkar teaches:

determine an implementation associated with at least one of the implementation-specific components; retrieve the at least one of the implementation-specific components; map each of the at least one of the implementation-specific components to a generic component to yield a mapping; and save the mapping (i.e. col. 4 lines 50-58; col. 4 lines 14-27; col. 7 lines 50-56; col. 6 lines 50-58).

Per claim 4:

The rejection of claim 1 is incorporated, and further, Sarkar teaches:

wherein the introspection module comprises a plurality of implementation modules, an implementation module operable to retrieve one or more implementation-specific components associated with an implementation (i.e. col. 6 lines 1-10, 50-58; col. 7 lines 8-18).

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Per claim 5:

Sarkar and Nicholson do not explicitly disclose debugger coupled to the process designer and operable to detect an error of the business process. However, Flores teaches that a GUI workflow application builder that includes the consistency checking module was known in the pertinent art, at the time applicant's invention was made, to validate a business process map and “preserves the details of the errors detected while checking the consistency of the map (i.e. col. 35 lines 36-40).” It would have been obvious for one having ordinary skill in the art to modify the disclosed system of Sarkar and Nicholson to incorporate the teachings of Flores. The modification would be obvious because one having ordinary skill in the art would be motivated to detect errors for consistency (i.e. col. 35 lines 36-40) as suggested by Flores.

Per claim 6:

The rejection of claim 1 is incorporated, and further, Sarkar teaches:

- a data warehouse coupled to the one or more process engines and operable to store transactional data describing the executed business process; and a data server coupled to the data warehouse and operable to organize the transactional data. (col. 7 lines 50-56; col. 6 lines 50-58; col. 2 lines 16-41) as claimed.

Per claim 21:

The rejection of claim 1 is incorporated, and further, Sarkar teaches:

- at least one implementation module that is used to access implementation-specific components associated with at least one of: Java, Standard Query Language (SQL), Automation, Enterprise

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JavaBeans (EJB), CORBA, Remote Method Invocation (RMI), Extensible Markup Language (XML) schemas, Web Services and Java Naming and Directory Interface (JNDI) (“Java beans,” col.5 lines 30-40 ; “EJB environment,” col. 5 lines 30-41) as claimed.

Per claim 22:

The rejection of claim 1 is incorporated, and further, Sarkar teaches:

- a binding table containing one or more entries that associate the selected implementation-specific components with generic components from said catalog (i.e. col. 6 lines 50-58).

Per claims 23-29, they are the method versions of claims 1-6 and 21-22, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 1-6 and 21-22 above.

Per claim 30, it is the computer readable medium version of claim 1, respectively, and is rejected for the same reason set forth in connection with the rejection of claim 1 above.

Per claim 31:

Sarkar and Nicholson do not explicitly disclose that said business process definition is published to the repository before being deployed to the process engine. However, Flores teaches publishing the business process definition to the repository was known in the pertinent art, at the time applicant's invention was made, to “determine new workflow states and available actions (i.e. col. 5 lines 15-23).” It would have been obvious for one having ordinary skill in the art to modify the disclosed system of Sarkar and Nicholson to incorporate the teachings of



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Flores. The modification would be obvious because one having ordinary skill in the art would be motivated to record business process definitions into a repository before deploying the definitions so that new workflow states and available actions can be determined (i.e. col. 5 lines 15-23) as suggested by Flores.

Per claim 32:

Sarkar further discloses:

- the catalog contains one or more entries, each entry including metadata that describes at least one of the plurality of implementation-specific components (i.e. col. 6 lines 1-10, 50-58; col. 7 lines 8-18).

Per claim 33:

Sarkar and Nicholson do not explicitly disclose that an activity of said business process definition connects to a subprocess that operates as a business process. However, Flores teaches it was known in the pertinent art, at the time applicant's invention was made, to operate any subprocess (i.e. col. 22 lines 7-12, 22-28) of the business process. It would have been obvious for one having ordinary skill in the art to modify the disclosed system of Sarkar and Nicholson to incorporate the teachings of Flores. The modification would be obvious because one having ordinary skill in the art would be motivated to complete any existing subprocess of the business process for logical consistency (i.e. col. 22 lines 7-12) as suggested by Flores.

Per claim 34:

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Flores further discloses: said transitions indicate a next activity that is to be initiated after executing a previous activity (i.e. col. 6 lines 27-31).

***Response to Arguments***

5. Applicant's arguments with respect to claims 1-6 and 21-34 have been considered but are moot in view of the new ground(s) of rejection.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Insun Kang whose telephone number is 571-272-3724. The examiner can normally be reached on M-R 6:30-5 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MENG AI AN can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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